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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/806,239	03/23/2004	Itsuji Minami	5670-0102PUS1	9656

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EXAMINER
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MISLEH, JUSTIN P

ART UNIT	PAPER NUMBER
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2622

NOTIFICATION DATE	DELIVERY MODE
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12/04/2008

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

<b>Office Action Summary</b>	<b>Application No.</b> 10/806,239	<b>Applicant(s)</b> MINAMI ET AL.	
	<b>Examiner</b> JUSTIN P. MISLEH	<b>Art Unit</b> 2622	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 16 January 2008.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on August 25, 2008 has been entered.

### ***Response to Arguments***

2. Applicant's arguments filed August 25, 2008 have been fully considered but they are not persuasive.

3. Applicant argues, "In Fig. 1D of Minami et al., there is no clearance between adhesion areas on a same side of the cover glass 22. For example, in Fig. 1D, there is no clearance between adhesion areas located on the right side of cover glass 22, and formed between CCD 20 and cover glass 22, and above circuit board 24, respectively."

4. The Examiner respectfully disagrees with Applicant's interpretation. The cover glass (22) also has a bottom side, in addition to the agreed upon left and right sides, that are shown in figure 1(D). Therefore, there still is a clearance between a first adhesion area (e.g., the adhesion area between the sensor (20) and the cover glass (22) at pad G on the left side) and a second adhesion area (e.g., the adhesion area between the pad H, on the circuit board (24), and the cover glass (22) on the right side). In this instance, there is a clearance formed between the first

Art Unit: 2622

adhesion area and the second adhesion area, wherein both adhesion areas are on the same bottom side of the cover glass. For this reason, the rejection will be maintained.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. **Claim 1** is rejected under 35 U.S.C. 103(a) as being unpatentable over Minami et al. (US 6,040,612) in view of Kim et al. (US 7,138,695 B2).

7. For **Claim 1**, Minami et al. disclose, as shown in figures 1(A) – 1(D), an imaging apparatus comprising:

an imaging portion (20) in which a cover glass (22) is adhered to an imaging surface side (S) of a solid-state image pickup device (20) as if sandwiching leads (21), a slight air gap (D) is formed between the cover glass (22) and the imaging surface (S) of the solid-state image pickup device (20) and a circumference of the cover glass (22) is larger than the solid-state image pickup device (20 – clearly shown in figure 1(D)), and

a circuit board (24) having an accommodation portion (space between through holes 25 and 24A) for accommodating the solid-state image pickup device (20)) so as to connect the leads (21) to terminals on an upper edge of the accommodation portion (leads 21 are attached to the circuit board 24 and to that solid-state image pickup device 20 residing in the accommodation portion),

Art Unit: 2622

wherein the portion (space between through holes 25 and 24A) for accommodating the solid-state image pickup device (20)) forms a clearance between an adhesion area between the solid state image sensor (20) and the cover glass (22), and an adhesion area between the cover glass (22) and the circuit board (24; see Examiner's explanation below);

wherein the circumference of adhesion area between the cover glass (22) and the circuit board (22) adheres to the circuit board (24) in a state of sealing the accommodation portion (figure 1(C) shows where the outer adhesion area is applied to all sides of the accommodation portion).

The Examiner respectfully notes the accommodation portion is rectangular with top, bottom, left, and right sides. There are at least two adhesion areas on each of the left and right sides. For instance, on the left side, as seen in figures 1(C) and 1(D), there is an adhesion area between the sensor (20) and the cover glass (22) at pad G and there is also an adhesion area between the pad H, on the circuit board (24), and the cover glass (22). The cover glass (22) also has a bottom side, in addition to the agreed upon left and right sides, that are shown in figure 1(D). Therefore, there still is a clearance between a first adhesion area (e.g., the adhesion area between the sensor (20) and the cover glass (22) at pad G on the left side) and a second adhesion area (e.g., the adhesion area between the pad H, on the circuit board (24), and the cover glass (22) on the right side). In this instance, there is a clearance formed between the first adhesion area and the second adhesion area, wherein both adhesion areas are on the same bottom side of the cover glass.

However, Minami et al. do not show where the accommodation portion is a concave accommodation portion. In other words, Minami et al. simply shows where the sensor package

Art Unit: 2622

is directly inserted into the accommodation portion and does show a housing surrounding the sensor package when inserted in the accommodation portion.

On the other hand, Kim et al. also show an imaging apparatus with a cover glass, sensor, and circuit board. Specifically, Kim et al. teach, in figure 4, an imaging apparatus with a cover glass (18), sensor (11), and circuit board (16), wherein the sensor (11) is seated in a hollow area formed on a side surface of the circuit board (see column 5, line 27 – 45). Additionally, Kim et al. teach where an epoxy resin (19) is molded to a rear surface of the circuit board (16) and the sensor (11). Therefore, the circuit board (16) and epoxy resin (19) in-combination form an accommodation concave portion in the circuit board (16) where the sensor resides.

The Examiner submits it would have been obvious to one with ordinary skill in the art to have incorporated the accommodation concave portion teachings of Kim et al. in the imaging apparatus disclosed by Minami et al. for the advantage of *enhancing air tightness and reliability of the imaging apparatus* (see Kim et al., column 2, lines 11 – 21).

### ***Conclusion***

8. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Justin P Misleh whose telephone number is 571.272.7313. The Examiner can normally be reached on Monday through Friday from 8:00 AM to 5:00 PM.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, David Ometz can be reached on 571.272.7593. The fax phone number for the organization where this application or proceeding is assigned is 571.273.8300.

Art Unit: 2622

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

**/Justin P. Misleh/  
Primary Examiner  
Group Art Unit 2622  
December 3, 2008**